INTERNATIONAL CYANIDE MANAGEMENT INSTITUTE

The International Cyanide Management Code

www.cyanidecode.org

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The International Cyanide Management Code (hereinafter "the Cyanide Code"") and other documents or information sources referenced at *www.cyanidecode.org* are believed to be reliable and were prepared in good faith from information reasonably available to the drafters. However, no guarantee is made as to the accuracy or completeness of any of these other documents or information sources. No guarantee is made in connection with the application of the Cyanide Code, the additional documents available or the referenced materials to prevent hazards, accidents, incidents, or injury to employees and/or members of the public at any specific site where gold or silver is extracted from ore by the cyanidation process. Compliance with the Cyanide Code is not intended to and does not replace, contravene or otherwise alter the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other requirements regarding the matters included herein. Compliance with the Cyanide Code is entirely voluntary and is neither intended nor does it create, establish, or recognize any legally enforceable obligations or rights on the part of its signatories, supporters or any other parties.

SCOPE

The Cyanide Code is a voluntary initiative for the gold and silver mining industries and the producers and transporters of the cyanide used in gold and silver mining. It is intended to complement an operation's existing regulatory requirements. Compliance with the rules, regulations and laws of the applicable political jurisdiction is necessary; the Cyanide Code is not intended to contravene such laws.

The Cyanide Code focuses exclusively on the safe management of cyanide that is produced, transported and used for the recovery of gold and silver, and on mill tailings and leach solutions. The Cyanide Code addresses production, transport, storage, and use of cyanide and the decommissioning of cyanide facilities. It also includes requirements related to financial assurance, accident prevention, emergency response, training, public reporting, stakeholder involvement and verification procedures. Cyanide producers and transporters are subject to the applicable portions of the Cyanide Code identified in their respective Verification Protocols.

It does not address all safety or environmental activities that may be present at gold and silver mining operations such as the design and construction of tailings impoundments or long-term closure and rehabilitation of mining operations.

The term "cyanide" used throughout the Cyanide Code generically refers to the cyanide ion, hydrogen cyanide, as well as salts and complexes of cyanide with a variety of metals in solids and solutions. It must be noted that the risks posed by the various forms of cyanide are dependent on the specific species and concentration. Information regarding the different chemical forms of cyanide is found at *http://www.cyanidecode.org/cyanide-facts/cyanide-chemistry* .

CYANIDE CODE IMPLEMENTATION

As it applies to gold and silver mining operations, the Cyanide Code is comprised of two major elements. The Principles broadly state commitments that signatories make to manage cyanide in a responsible manner. Standards of Practice follow each Principle, identifying the performance goals and objectives that must be met to comply with the Principle. The Principles and Practices applicable to cyanide production and transportation operations are included in their respective Verification Protocols. Operations are certified in compliance with the Cyanide Code upon the International Cyanide Management Institute's announcement on the Cyanide Code website that an independent third-party audit has verified that they have met the Standards of Practice, Production Practices or Transport Practices.

For implementation guidance, visit *http://www.cyanidecode.org/become-signatory/implementation-guidance*

The programs and procedures identified by the Cyanide Code's Principles and Standards of Practice and in the Cyanide Production and Transportation Verification Protocols for the management of cyanide can be developed separately from other programs, or they can be integrated into a site's overall safety, health and environmental management programs. Since mining operations typically do not have direct control over all phases of cyanide production,

transport or handling, mines that are undergoing Verification Audits for certification under the Cyanide Code will need to require that other entities involved in these activities commit to and demonstrate that they adhere to the Cyanide Code's Principles and meet its Standards of Practice for these activities.

The Cyanide Code, the implementation guidance, mine operators' guide, and other documents or information sources referenced at *www.cyanidecode.org* are believed to be reliable and were prepared in good faith from information reasonably available to the drafters. However, no guarantee is made as to the accuracy or completeness of any of these other documents or information sources. The implementation guidance, mine operators guide, and the additional documents and references are not intended to be part of the Cyanide Code. No guarantee is made in connection with the application of the Cyanide Code, the additional documents available or the referenced materials to prevent hazards, accidents, incidents, or injury to employees and/or members of the public at any specific site where gold or silver is extracted from ore by the cyanidation process. Compliance with the Cyanide Code is not intended to and does not replace, contravene or otherwise alter the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other requirements regarding the matters included herein. Compliance with the Cyanide Code is entirely voluntary and is neither intended nor does it create, establish, or recognize any legally enforceable obligations or rights on the part of its signatories, supporters or any other parties.

PRINCIPLES AND STANDARDS OF PRACTICE

1. PRODUCTION **Encourage responsible cyanide manufacturing by purchasing from manufacturers who operate in a safe and environmentally protective manner.**

Standard of Practice

1.1 Purchase cyanide from manufacturers employing appropriate practices and procedures to limit exposure of their workforce to cyanide and to prevent releases of cyanide to the environment.

2. TRANSPORTATION **Protect communities and the environment during cyanide transport.**

Standards of Practice

2.1 Establish clear lines of responsibility for safety, security, release prevention, training and emergency response in written agreements with producers, distributors and transporters.

2.2 Require that cyanide transporters implement appropriate emergency response plans and capabilities, and employ adequate measures for cyanide management.

3. HANDLING AND STORAGE **Protect workers and the environment during cyanide handling and storage.**

Standards of Practice

3.1 Design and construct unloading, storage and mixing facilities consistent with sound, accepted engineering practices and quality control and quality assurance procedures, spill prevention and spill containment measures.

3.2 Operate unloading, storage and mixing facilities using inspections, preventive maintenance and contingency plans to prevent or contain releases and control and respond to worker exposures.

4. OPERATIONS **Manage cyanide process solutions and waste streams to protect human health and the environment.**

Standards of Practice

4.1 Implement management and operating systems designed to protect human health and the environment including contingency planning and inspection and preventive maintenance procedures.

4.2 Introduce management and operating systems to minimize cyanide use, thereby limiting concentrations of cyanide in mill tailings.

4.3 Implement a comprehensive water management program to protect against unintentional releases.

4.4 Implement measures to protect birds, other wildlife and livestock from adverse effects of cyanide process solutions.

4.5 Implement measures to protect fish and wildlife from direct and indirect discharges of cyanide process solutions to surface water.

4.6 Implement measures designed to manage seepage from cyanide facilities to protect the beneficial uses of ground water.

4.7 Provide spill prevention or containment measures for process tanks and pipelines.

4.8 Implement quality control/quality assurance procedures to confirm that cyanide facilities are constructed according to accepted engineering standards and specifications.

4.9 Implement monitoring programs to evaluate the effects of cyanide use on wildlife, surface and ground water quality.

5. DECOMMISSIONING **Protect communities and the environment from cyanide through development and implementation of decommissioning plans for cyanide facilities.**

Standards of Practice

5.1 Plan and implement procedures for effective decommissioning of cyanide facilities to protect human health, wildlife and livestock.

5.2 Establish an assurance mechanism capable of fully funding cyanide-related decommissioning activities.

6. WORKER SAFETY **Protect workers' health and safety from exposure to cyanide.**

Standards of Practice

6.1 Identify potential cyanide exposure scenarios and take measures as necessary to eliminate, reduce and control them.

6.2 Operate and monitor cyanide facilities to protect worker health and safety and periodically evaluate the effectiveness of health and safety measures.

6.3 Develop and implement emergency response plans and procedures to respond to worker exposure to cyanide.

7. EMERGENCY RESPONSE **Protect communities and the environment through the development of emergency response strategies and capabilities.**

Standards of Practice

7.1 Prepare detailed emergency response plans for potential cyanide releases.

7.2 Involve site personnel and stakeholders in the planning process.

7.3 Designate appropriate personnel and commit necessary equipment and resources for emergency response.

7.4 Develop procedures for internal and external emergency notification and reporting.

7.5 Incorporate into response plans monitoring elements and remediation measures that account for the additional hazards of using cyanide treatment chemicals.

7.6 Periodically evaluate response procedures and capabilities and revise them as needed.

8. TRAINING **Train workers and emergency response personnel to manage cyanide in a safe and environmentally protective manner.**

Standards of Practice

8.1 Train workers to understand the hazards associated with cyanide use.

8.2 Train appropriate personnel to operate the facility according to systems and procedures that protect human health, the community and the environment.

8.3 Train appropriate workers and personnel to respond to worker exposures and environmental releases of cyanide.

9. DIALOGUE **Engage in public consultation and disclosure.**

Standards of Practice

9.1 Provide stakeholders the opportunity to communicate issues of concern.

9.2 Initiate dialogue describing cyanide management procedures and responsively address identified concerns.

9.3 Make appropriate operational and environmental information regarding cyanide available to stakeholders.

CYANIDE CODE MANAGEMENT

Administration

The International Cyanide Management Institute ("The Institute" or "ICMI") is a non-profit corporation established to administer the Cyanide Code through a multi- stakeholder Board of Directors consisting of representatives of the gold and silver mining industries and participants from other stakeholder groups. For additional information on the Institute, see: *http://www.cyanidecode.org/about-icmi*.

The Institute's primary responsibilities are to:

- Promote adoption of and compliance with the Cyanide Code, and to monitor its effectiveness and implementation within the world gold and silver mining industries.
- Develop funding sources and support for Institute activities.
- Work with governments, NGOs, financial interests and others to foster widespread adoption and support of the Cyanide Code.
- Identify technical or administrative problems or deficiencies that may exist with Cyanide Code implementation, and
- Determine when and how the Cyanide Code should be revised and updated.

Cyanide Code Signatories

Gold and silver mining companies and the producers and transporters of cyanide used in gold and silver mining can become signatories to the Cyanide Code. By becoming a signatory, a company commits to follow the Cyanide Code's Principles and implement its Standards of Practice, or in the case of producers and transporters, the Principles and Practices identified in their respective Verification Protocols. Cyanide Code signatories' operations will be audited by an independent third-party auditor to verify their compliance with the Cyanide Code.

When becoming a signatory, a company must specify which of its operations it intends on having certified. Only those cyanide production and transportation facilities that are related to the use of cyanide in gold and/or silver mining are subject to certification.

Signatories pay annual fees to support the Institute's activities. Failure to pay the required fee results in the company's termination from participation in the Cyanide Code program. See: http://www.cyanidecode.org/signatory-companies/directory-of-signatory-companies.

Cyanide Code Verification and Certification

Active operations must be audited to verify their compliance with the Cyanide Code within three years of being designated for certification. This requirement is met if the site inspection portion of the audit has been conducted by the applicable deadline. A certified operation must have the site inspection portion of its next audit conducted within three years of the effective date of its previous audit, which is the date the Institute posts its Summary Audit Report and announces its certification on the Cyanide Code website.

During an *initial* verification audit, an operation's compliance at the time of the audit will be evaluated. Subsequent *recertification* audits also will evaluate compliance during the period between the preceding and current audits.

Audits are to be conducted by independent, third-party professionals. Auditors are selected and hired by the signatory or operation but must meet the Institute's criteria for their experience and expertise. Auditors evaluate an operation against the applicable Cyanide Code Verification Protocol to determine if its management of cyanide achieves the Code's Principles and Standards of Practice, or the Production or Transport Practices for these types of operations. Operations must make all relevant data available to the auditors, including the complete findings of their most recent independent Cyanide Code Verification Audit, in order to be considered for certification.

Submission of audit results; finding of full compliance: Before finalizing an audit report, the auditor must review the audit findings with the operation to ensure that the information presented is accurate. Within 90 days of completing the inspection of the operation, the auditor must submit: (1) a Detailed Audit Findings Report responding to the questions in the Verification Protocol; (2) a Summary Audit Report that includes the auditor's conclusion regarding the operation's compliance with the Cyanide Code; and (3) the auditor's credentials to the signatory, the operation and to the Institute.

ICMI will review the audit report to ensure that appropriate responses have been provided for all Verification Protocol questions and that adequate evidence has been included in support of the auditor's findings, and will advise the auditor and the operation when the report has been accepted as complete.

The operation will then be certified by the auditor as complying with the Cyanide Code if the auditor concludes that it is in full compliance with the Code's Principles and Standards of Practice, or its Principles and Practices for cyanide production or transportation, as applicable. The certification becomes effective when the Institute announces the certification and posts the Summary Audit Report on the Cyanide Code website.

The Detailed Audit Findings Report is the confidential property of the operation and shall not be released by the Institute in any fashion without the written consent of the signatory and/or audited operation. The Summary Audit Report and the credentials of the auditor(s) will be made available to the public on the Cyanide Code website. The operation may submit its comments regarding the Summary Audit Report to the Institute, which will be posted along with the Summary Audit Report on the Institute's website.

Finding of substantial compliance: Operations that are found in substantial compliance with the Cyanide Code are conditionally certified, subject to the successful implementation of a Corrective Action Plan. Substantial compliance means that the operation has made a good-faith effort to comply with the Cyanide Code and that the deficiencies identified by the auditor can be readily corrected and do not present an immediate or substantial risk to employee or community health, safety, or the environment.

Operations that are found in substantial compliance with a Standard of Practice, Production Practice or Transport Practice must develop and implement a Corrective Action Plan to correct the deficiencies identified by the verification audit. The operation shall request that the auditor review the Corrective Action Plan or assist in its development so that there is agreement between the operation and the auditor that its implementation will bring the operation into full compliance. The Corrective Action Plan addressing a finding of substantial compliance must include a time period, mutually agreed to by the operation and the auditor, to bring the operation into full compliance with the Cyanide Code. In no case shall this time period be longer than one year from the date on which ICMI posts the operation's Summary Audit Report on the Cyanide Code website. The auditor must submit the Corrective Action Plan to the Institute for posting on the Institute's website along with the Summary Audit Report.

Finding of non-compliance: Operations that were audited and found in non-compliance with one or more Standards of Practice, Production Practices or Transport Practices, and those that have not fully implemented a Corrective Action Plan by the applicable deadline, are in non-compliance with the Cyanide Code. To be certified, these operations must: (1) maintain compliance with those Standards or Practices that were found in full compliance during their audit; and (2) fully implement their Corrective Action Plans. Operations that do not fully implement their Corrective Action Plans within three years of the date their Summary Audit

Report was posted on the Institute's website also must submit to the Institute the report of a new audit with a finding of full compliance in order to be certified.

Corrective Action Plan and Completion Report: The operation must provide evidence to the auditor demonstrating that it has implemented the Corrective Action Plan as specified and in the agreed-upon time frame. In some cases, it may be necessary for the auditor to re-evaluate the operation to confirm that the Corrective Action Plan has been implemented. Upon receipt of the documentation that the Corrective Action Plan has been fully implemented, the auditor must provide a Completion Report to the Institute verifying that the operation is in full compliance with the Cyanide Code.

All operations certified in compliance with the Cyanide Code will be identified on the Code website, *http://www.cyanidecode.org/signatory-companies/directory-of-signatory-companies*. Each certified operation's Summary Audit Report will be posted. Operations found in substantial or non-compliance will have their Summary Audit Reports, Corrective Action Plans and Corrective Action Plan Completion Reports posted.

Pre-operational certification: A mining operation, cyanide production facility or cyanide transport operation that is not yet active but that is sufficiently advanced in its planning and design phases can request pre-operational conditional certification based on an auditor's review of its site plans and proposed operating procedures. An operation audited pre-operationally and found in full compliance will be certified conditionally, and remains so until the findings of its operational audit become effective. An on-site audit is required within one year of a mining operation's first receipt of cyanide at the site to confirm that the operation has been constructed and is being operated in compliance with the Cyanide Code. On-site audits of cyanide production facilities and cyanide transport operations are required within six months of their start of cyanide production or management activities. These operations must advise ICMI within 90 days of the date of the first receipt of cyanide at a mining operation or of the start of cyanide production or management activities at a cyanide production or transport operation. A new three-year certification period begins when the findings of the operational audit become effective.

Mining operations that have been designated for certification before they become active but which do not request pre-operational certification must be audited for compliance with the Cyanide Code within one year of their first receipt of cyanide, and also must advise ICMI within 90 days of the date of their first receipt of cyanide. Cyanide production facilities and cyanide transport operations that have been designated for certification before they become active but which do not request pre-operational certification must be audited for compliance with the Cyanide Code and be certified in full or substantial compliance before providing cyanide to a certified mine.

A mining operation or an individual cyanide facility at an operation is no longer subject to certification after decommissioning of the cyanide facilities. A producer or transporter is no longer subject to certification after it no longer produces or transports cyanide for use in the gold or silver mining industries.

Certification Maintenance

In order to maintain certification, an operation must meet all of the following conditions:

- The auditor has concluded that it is either in full compliance or substantial compliance with the Cyanide Code.
- An operation in substantial compliance has submitted a Corrective Action Plan to correct its deficiencies and has demonstrated that it has fully implemented the Corrective Action Plan in the agreed-upon time.
- There is no verified evidence that the operation is not in compliance with the Cyanide Code.
- An operation has had a verification audit within three years.
- An operation has had a verification audit within two years of a change in ownership, defined as a change of the controlling interest of the operating company.

Re-admission, Re-designation and Re-activation

Signatory companies that have voluntarily withdrawn or have been terminated from participation in the Cyanide Code can seek re-admission to the program. Operations that had been certified or designated for certification but which were subsequently voluntarily withdrawn from the program by the signatory company can return to the program and be re-designated for certification.

Auditor Criteria and Review Process

The Institute has developed specific criteria for Cyanide Code Verification auditors and will implement procedures for review of auditor credentials. Auditor criteria includes requisite levels of experience with gold or silver mining (or chemical production facilities or hazardous materials transport, as appropriate) and in conducting environmental, health or safety audits, certification as a professional health, safety or environmental auditorby a self-regulating organization and lack of conflicts of interest with operation(s) to be audited.

Dispute Resolution

The Institute has developed and implemented fair and equitable procedures for resolution of disputes regarding auditor credentials and certification and/or de-certification of operations. The procedures provide due process to all parties that may be affected by these decisions.

Information Availability

The Cyanide Code and related information and program management documentation are available via the Internet at www.cyanidecode.org. The website is intended to promote an understanding of the issues involved in cyanide management and to provide a forum for enhanced communication within and between the various stakeholder groups with interest in these issues. The website is the repository for Cyanide Code certification and verification information.